

AMENDMENT TO THE CLAIMS

Listing of Claims:

1. (Currently Amended) A communication system comprising:
 - a base station;
 - a single-carrier wireless communication terminal for performing a packet communication with said base station; and
 - a multi-carrier wireless communication terminal for performing a packet communication with said base station substantially at the same time,wherein said base station comprises:
 - a storage section for storing allocation information, wherein the storage section sets and stores a first allocation information region for the single-carrier wireless communication terminal and a second allocation information region for the multi-carrier wireless communication terminal;
 - a first allocation section for at least one of allocating a carrier to said single-carrier wireless communication terminal and carriers to said multi-carrier wireless communication terminal from a plurality of carriers, said allocated carrier or carriers to be used during communication with said base station; and
 - a second allocation section for allocating allocation information of the single-carrier set in the first allocation information region for at least one of said single-carrier wireless communication terminal and for allocating allocation information of the multi-carrier set in the second allocation information region for at least one of said multi-carrier wireless communication terminal based on the availability of said allocation information, wherein said

allocation information identifies a wireless communication terminal communicating with said base station; ~~and,~~

~~a storage section for storing said allocation information in relation to said carrier or carriers that have been allocated to at least one of said single-carrier wireless communication terminal and said multi-carrier wireless communication terminal~~

2. (Currently Amended) A wireless communication system as claimed in claim 1 wherein said storage section stores said allocation information in such a manner that said allocation information is arrayed in accordance with a predetermined sequence; and

said second allocation ~~information allocating~~ section allocates said allocation information with respect to said ~~first~~ single-carrier wireless communication terminal from one direction of said array, and also allocates said allocation information to said ~~second~~ multi-carrier wireless communication terminal from the other direction of said array.

3. (Currently Amended) A wireless communication system as claimed in claim 2 wherein said second allocation ~~information allocating~~ section is capable of changing a boundary in said array between said allocation information allocated to said ~~first~~ single-carrier wireless communication terminal and said allocation information allocated to said ~~second~~ multi-carrier wireless communication terminal.

4. (Currently Amended) A wireless communication system as claimed in claim 1 wherein said storage section stores therein both the allocation information allocated to ~~second~~ single-carrier wireless communication terminal and the allocation information allocated to said ~~second~~ multi-carrier wireless communication terminal as separate arrays.

5. (Original) A wireless communication system as claimed in claim 1 wherein said packet communication is carried out by using a variable length packet.

6. (Currently Amended) A communication system as claimed in claim 1, further comprising:

a time slot allocating section for allocating time slots which are used in packet communications by said ~~first single-~~ and multi-carrier ~~second~~-wireless communication terminals, the time slot allocating section allocates one wireless communication terminal among said ~~first single-~~ and multi-carrier ~~second~~-wireless communication terminals to one unit of a time slot distribution used by said ~~first single-~~ and multi-carrier ~~second~~-wireless communication terminals in the packet communications for said one carrier and each of said plurality of carriers.

7. (Currently Amended) A wireless communication system as claimed in claim 6, wherein said time slot allocating section allocates one wireless communication terminal among said ~~first single-~~ and multi-carrier ~~second~~-wireless communication terminals to one unit of a time slot distribution used by said ~~first and second~~ single- and multi-carrier wireless communication terminals in the packet communications for said one carrier and each of said plurality of carriers, and also allocates said ~~first single-carrier~~ wireless communication terminal and said multi-carrier ~~second~~-wireless communication terminal in an independent manner.

8. (Currently Amended) A wireless communication system as claimed in claim 6, wherein said time slot allocating section allocates one wireless communication terminal among said ~~first and second~~ single- and multi-carrier wireless communication terminals to one unit of a time slot distribution used by said ~~first and second~~ single- and multi-carrier wireless communication terminals in the packet communications for said one carrier and each of said

plurality of carriers, and also allocates said first wireless communication terminal and said second wireless communication terminal in an alternate manner.

9. (Original) A wireless communication system as claimed in claim 6, wherein said packet communication is carried out by using a variable length packet.

10. (Currently Amended) A communication system as claimed in claim 1 further comprising:

a time slot allocating section for allocating time slots which are used in packet communications by said ~~first and second~~ single- and multi-carrier wireless communication terminals; and

a time slot distribution determining section for determining a time slot distribution which can be used by both said ~~first~~ single-carrier wireless communication terminal and said ~~second~~ multi-carrier wireless communication terminal.

11. (Currently Amended) A wireless communication system as claimed in claim 10 wherein said time slot allocating section allocates time slots which are independently used in the packet communications by said ~~first and second~~ single- and multi-carrier wireless communication terminals within the time slot distribution which can be used by said ~~first~~ single-carrier wireless communication terminal and the time slot distribution which can be used by said ~~second~~ multi-carrier wireless communication terminal, both said time slot distributions being determined by said time slot distribution determining section.

12. (Currently Amended) A wireless communication system as claimed in claim 10 wherein said time slot distribution determining section determines the time slot distributions which can be used by said first wireless communication terminal and said second wireless

communication terminal based upon a comparison result made between communication qualities of said first-single-carrier wireless communication terminal and communication qualities of said ~~second~~-multi-carrier wireless communication terminal.

13. (Currently Amended) A wireless communication system as claimed in claim 12 wherein said time slot distribution determining section determines the time slot distributions which can be used by said first-single-carrier wireless communication terminal and said ~~second~~ multi-carrier wireless communication terminal based upon a comparison result made between an average value of communication qualities of said first-single-carrier wireless communication terminal and an average value of communication qualities of said ~~second~~-multi-carrier wireless communication terminal.

14. (Currently Amended) A wireless communication system as claimed in claim 12 wherein said time slot distribution determining section determines the time slot distributions which can be used by said first-single-carrier wireless communication terminal and said ~~second~~ multi-carrier wireless communication terminal based upon a comparison result made between a maximum value of communication qualities of said first-single-carrier wireless communication terminal and a maximum value of communication qualities of said ~~second~~-multi-carrier wireless communication terminal.

15. (Currently Amended) A wireless communication system as claimed in claim 10 wherein said time slot distribution determining section determines the time slot distributions which can be used by said first-single-carrier wireless communication terminal and said ~~second~~ multi-carrier wireless communication terminal based upon a comparison result made between a total number of said first-single-carrier wireless communication terminals and also a total

number of said ~~second~~-multi-carrier wireless communication terminals, which are connected to said base station.

16. (Currently Amended) A base station apparatus for performing a packet communication with respect to both a first wireless communication terminal for performing a packet communication by using ~~one~~-a single carrier, and a second wireless communication terminal for performing a packet communication by using a plurality of carriers at the same time, said base station apparatus comprising:

a storage section for storing allocation information, wherein the storage section sets and stores a first allocation information region for the first wireless communication terminal and a second allocation information region for the second wireless communication terminal;

a first allocation section for at least one of allocating a carrier to said first wireless communication terminal and carriers to said second wireless communication terminal from a plurality of carriers, said allocated carrier or carriers to be used during communication with said base station;

a second allocation section for allocating allocation information of the single-carrier set in the first allocation information region for at least one of said first wireless communication terminal and for allocating allocation information of the plurality of carriers set in the second allocation information region for at least one of said second wireless communication terminal based on the availability of said allocation information, wherein said allocation information identifies a wireless communication terminal communicating with said base station; ~~and.~~

~~a storage section for storing said allocation information in relation to said carrier or carriers that have been allocated to at least one of said first wireless communication terminal and said second wireless communication terminal.~~

17. (Original) A base station apparatus as claimed in claim 16, wherein said packet communication is carried out by using a variable length packet.

18. (Previously Presented) A base station apparatus as claimed in claim 16, further comprising:

a time slot allocating section for allocating time slots which are used by the wireless communication terminals in packet communications, said time slot allocating section allocates one wireless communication terminal among said first and second wireless communication terminals to one unit of a time slot distribution used by said first and second wireless communication terminals in the packet communications for said one carrier and each of said plurality of carriers.

19. (Original) A base station apparatus as claimed in claim 18, wherein said packet communication is carried out by using a variable length packet.

20. (Previously Presented) A base station apparatus as claimed in claim 16 further comprising:

a time slot allocating section for allocating time slots which are used in packet communications by said first and second wireless communication terminals; and

a time slot distribution determining section for determining a time slot distribution which can be used by both said first wireless communication terminal and said second wireless communication terminal.

21. (Original) A base station apparatus as claimed in claim 20 wherein said packet communication is carried out by using a variable length packet.

22. (Withdrawn) A wireless communication terminal for communicating with a base station apparatus which performs a packet communication with respect to both a wireless communication terminal for executing a packet communication by employing one carrier and also another wireless communication terminal for executing a packet communication by employing a plurality of carriers at the same time; and said base station apparatus comprising:

an allocation information allocating section for allocating allocation information for one carrier or a plurality of carriers to a wireless communication terminal when at least one carrier is allocated to said wireless communication terminal; and an allocation information storage section for storing said allocation information for one carrier or a plurality of carriers; wherein said wireless communication terminal judges a destination of a communication packet transmitted from said base station based upon said allocation information contained in a header of said transmitted packet so as to be communicated with said base station.

23. (Withdrawn) A wireless communication terminal as claimed in claim 22, wherein said packet communication is carried out by using a variable length packet.

24. (Withdrawn) A wireless communication terminal for communicating with a base station apparatus which performs a packet communication with respect to both a wireless communication terminal for executing a packet communication by employing one carrier and also another wireless communication terminal for executing packet communication by employing a plurality of carriers at the same time; and

said base station apparatus comprising: an allocation information allocating section for allocating allocation information for one carrier or a plurality of carriers to a wireless communication terminal when at least one carrier is allocated to said wireless communication terminal; a time slot allocating section for allocating time slots which are used by the wireless communication terminals in packet communications; and allocation information storage section for storing said allocation information for one carrier or a plurality of carriers; in which said time slot allocating section allocates one wireless communication terminal among said first and second wireless communication terminals to one unit of a time slot distribution used by said first and second wireless communication terminals in the packet communications for said one carrier and each of said plurality of carriers; wherein:

said wireless communication terminal judges a destination of a communication packet transmitted from said base station based upon said allocation information contained in a header of said transmitted packet so as to be communicated with said base station.

25. (Withdrawn) A wireless communication terminal as claimed in claim 24 wherein said packet communication is carried out by using a variable length packet.

26. (Withdrawn) A wireless communication terminal for communicating with a base station apparatus which performs a packet communication with respect to both a wireless communication terminal for executing a packet communication by employing one carrier and also another wireless communication terminal for executing a packet communication by employing a plurality of carriers at the same time; and

said base station apparatus comprising: an allocation information allocating section for allocating allocation information for one carrier or a plurality of carriers to a wireless communication terminal when at least one carrier is allocated to said wireless communication

terminal; a time slot allocating section for allocating time slots which are used by the wireless communication terminals in packet communications; an allocation information storage section for storing said allocation information for one carrier or a plurality of carriers; and a time slot distribution determining section for determining a time slot distribution which can be used by both the wireless communication terminal using one carrier, and also, the wireless communication terminal using the plural carriers at the same time;

wherein said wireless communication terminal judges a destination of a communication packet transmitted from said base station based upon said allocation information contained in a header of said transmitted packet so as to be communicated with said base station.

27. (Withdrawn) A wireless communication terminal as claimed in claim 26, wherein said packet communication is carried out by using a variable length packet.

28. (Currently Amended) A communication system comprising;

- a base station;
- a first wireless communication terminal for performing a packet communication with respect to said base station by using a single ~~one~~ carrier; and
- a second wireless communication terminal for performing a packet communication with respect to said base station by using a plurality of carriers at the same time,

wherein said base station comprises:

- a storage section for storing allocation information, wherein the storage section sets and stores a first allocation information region for the first wireless communication terminal and a second allocation information region for the second wireless communication terminal ~~including single carrier allocation information and multi carrier allocation information;~~

a first allocation section for at least one of allocating a carrier to said first wireless communication terminal and carriers to said second wireless communication terminal from a plurality of carriers, said allocated carrier or carriers to be used during communication with said base station; and

~~an a second allocation information allocating applying section for allocating allocation information of the single-carrier set in the first allocation information region for applying said single carrier allocation information to said first wireless communication terminal, and for allocating allocation information of the plurality of carriers set in the second allocation information region for said multi-carrier allocation information to said second wireless communication terminal when said second wireless communication terminal performs communications by using said plurality of carriers based on the availability of said allocation information; and~~

wherein said allocation information is for identifying a wireless communication terminal communicating with said base station and wherein said allocation information is for identifying one carrier or a plurality of carriers.

29. (Currently Amended) A wireless communication system as claimed in claim 28 wherein said second allocation information storage section stores said allocation information in such a manner that said allocation information is arrayed in accordance with a predetermined sequence; and

said second allocation information applying section allocates said single-carrier allocation information with respect to said first wireless communication terminal from one direction of said array of allocation information, and also allocates said multi-carrier allocation information to said second wireless communication terminal from the other direction

of said array when said second wireless communication terminal performs the communication by using said plurality of carriers.

30. (Currently Amended) A wireless communication system as claimed in claim 29 wherein said second allocation information applying section is capable of changing a boundary in said array between said single-carrier allocation information allocated to said first wireless communication terminal and said multi-carrier allocation information allocated to said second wireless communication terminal when said second wireless communication terminal performs the communication by using said plurality of carriers.

31. (Previously Presented) A wireless communication system as claimed in claim 28 wherein said allocation information storage section stores therein both the single-carrier allocation information allocated to said first wireless communication terminal and the multi-carrier allocation information allocated to said second wireless communication terminal said second wireless communication terminal performs the communication by using said plurality of carriers, as separate arrays.

32. (Previously Presented) A wireless communication system as claimed in claim 29 wherein said packet communication is carried out by using a variable length packet.

33. (Currently Amended) A wireless communication system as claimed in claim 28 wherein when said second wireless communication terminal performs the communication by using said plurality of carriers, said second allocation information applying section allocates said single-carrier allocation information to said second wireless communication terminal in a case that said multi-carrier allocation information is unavailable.

34. (Currently Amended) A wireless communication system as claimed in claim 28 wherein said second allocation ~~information applying~~ section allocates said multi-carrier allocation information to said first wireless communication terminal in a case that said single-carrier allocation information is unavailable.

35. (Previously Presented) A communication system as claimed in claim 28, further comprising:

an allocating section for allocating frames which are used in packet communications by said first and second wireless communication terminals,

wherein said allocating section allocates one wireless communication terminal among said first and second wireless communication terminals to one unit of the frames used by said first and second wireless communication terminals in the packet communications for said one carrier and each of said plurality of carriers.

36. (Previously Presented) A wireless communication system as claimed in claim 35, wherein said allocating section allocates one wireless communication terminal among said first and second wireless communication terminals to one unit of the frames used by said first and second wireless communication terminals in the packet communications every said carrier, and also allocates said first wireless communication terminal and said second wireless communication terminal in an independent manner.

37. (Previously Presented) A wireless communication system as claimed in claim 35, wherein said allocating section allocates one wireless communication terminal among said first and second wireless communication terminals to one unit of the frames used by said first and second wireless communication terminals in the packet communications every said

carrier, and also allocates said first wireless communication terminal and said second wireless communication terminal in an alternate manner.

38. (Previously Presented) A wireless communication system as claimed in claim 35, wherein said packet communication is carried out by using a variable length packet.

39. (Previously Presented) A communication system as claimed in claim 28 further comprising:

an allocating section for allocating frames which are used in packet communications by said first and second wireless communication terminals; and

a time slot distribution determining section for determining a time slot distribution in the frames which can be used by both said first wireless communication terminal and said second wireless communication terminal.

40. (Previously Presented) A wireless communication system as claimed in claim 39 wherein said allocating section allocates frames which are independently used in the packet communications by said first and second wireless communication terminals within the time slot distribution which can be used by said first wireless communication terminal and the time slot distribution which can be used by said second wireless communication terminal, both said time slot distributions being determined by said time slot distribution determining section.

41. (Previously Presented) A wireless communication system as claimed in claim 39 wherein said time slot distribution determining section determines the time slot distributions in the frames which can be used by said first wireless communication terminal and said second wireless communication terminal based upon a comparison result made between

communication qualities of said first wireless communication terminal and communication qualities of said second wireless communication terminal.

42. (Previously Presented) A wireless communication system as claimed in claim 41 wherein said time slot distribution determining section determines the time slot distributions in the frames which can be used by said first wireless communication terminal and said second wireless communication terminal based upon a comparison result made between an average value of communication qualities of said first wireless communication terminal and an average value of communication qualities of said second wireless communication terminal.

43. (Previously Presented) A wireless communication system as claimed in claim 41 wherein said time slot distribution determining section determines the time slot distributions in the frames which can be used by said first wireless communication terminal and said second wireless communication terminal based upon a comparison result made between a maximum value of communication qualities of said first wireless communication terminal and a maximum value of communication qualities of said second wireless communication terminal.

44. (Previously Presented) A wireless communication system as claimed in claim 39 wherein said time slot distribution determining section determines the time slot distributions in the frames which can be used by said first wireless communication terminal and said second wireless communication terminal based upon a comparison result made between a total number of said first wireless communication terminals and also a total number of said second wireless communication terminals, which are connected to said base station.

45. (Currently Amended) A base station apparatus for performing a packet communication with respect to both a first wireless communication terminal for performing a

packet communication by using ~~one~~ a single carrier, and a second wireless communication terminal for performing a packet communication by using a plurality of carriers at the same time, said base station apparatus comprising:

a storage section for storing allocation information, wherein the storage section sets and stores a first allocation information region for the first wireless communication terminal and a second allocation information region for the second wireless communication terminal~~including single carrier allocation information and multi carrier allocation information;~~

a first allocation section for at least one of allocating a carrier to said first wireless communication terminal and carriers to said second wireless communication terminal from a plurality of carriers, said allocated carrier or carriers to be used during communication with said base station; and

~~an a second allocation information allocating~~ applying section for allocating allocation information of the one carrier set in the first allocation information region for ~~applying said single carrier allocation information to said first wireless communication terminal, and for~~ allocating allocation information of the plurality of carriers set in the second allocation information region for ~~said multi carrier allocation information to said second wireless communication terminal when said second wireless communication terminal performs communications by using said plurality of carriers based on the availability of said allocation information; and~~

wherein said allocation information is for identifying a wireless communication terminal communicating with said base station and wherein said allocation information is for identifying one carrier or a plurality of carriers.

46. (Previously Presented) A base station apparatus as claimed in claim 45, wherein said packet communication is carried out by using a variable length packet.

47. (Currently Amended) A base station apparatus as claimed in claim 45 wherein when said second wireless communication terminal performs the communication by using said plurality of carriers, said second allocation ~~information~~ ~~applying~~ section allocates said single-carrier allocation information to said second wireless communication terminal in a case that said multi-carrier allocation information is unavailable.

48. (Currently Amended) A base station apparatus as claimed in claim 45 wherein said second allocation information applying section allocates said multi-carrier allocation information to said first wireless communication terminal in a case that said single-carrier allocation information is unavailable.

49. (Previously Presented) A base station apparatus as claimed in claim 45, further comprising:

an allocating section for allocating frames which are used by the wireless communication terminals in packet communications, said allocating section allocates one wireless communication terminal among said first and second wireless communication terminals to one unit of the frames used by said first and second wireless communication terminals in the packet communications for said one carrier and each of said plurality of carriers.

50. (Previously Presented) A base station apparatus as claimed in claim 49, wherein said packet communication is carried out by using a variable length packet.

51. (Previously Presented) A base station apparatus as claimed in claim 45 further comprising:

an allocating section for allocating frames which are used in packet communications by said first and second wireless communication terminals; and

a time slot distribution determining section for determining a time slot distribution in the frames which can be used by both said first wireless communication terminal and said second wireless communication terminal.

52. (Previously Presented) A base station apparatus as claimed in claim 51 wherein said packet communication is carried out by using a variable length packet.

53. (Withdrawn) A wireless communication terminal to which multi-carrier allocation information is allocated by a base station when the wireless communication terminal performs a packet communication with respect to said base station by using a plurality of carriers at the same time,

wherein said wireless communication terminal judges a destination of a communication packet transmitted from said base station based upon said multi-carrier allocation information contained in a header of said transmitted packet so as to perform the packet communication with respect to said base station by using the plurality of carriers.

54. (Withdrawn) A wireless communication terminal as claimed in claim 53, wherein said packet communication is carried out by using a variable length packet.

55. (Withdrawn) A wireless communication terminal as claimed in claim 53 wherein the single-carrier allocation information is allocated when the multi-carrier allocation information is unavailable, and

said wireless communication terminal judges a destination of the communication packet transmitted from said base station based upon said single-carrier allocation information contained in a header of said transmitted packet so as to perform the packet communication with respect to said base station by using the plurality of carriers.

56. (Withdrawn) A wireless communication terminal to which multi-carrier allocation information is allocated by a base station when the wireless communication terminal performs a packet communication with respect to said base station by using a plurality of carriers at the same time,

wherein said wireless communication terminal judges a destination of a communication packet in one frame transmitted from said base station based upon said multi-carrier allocation information contained in a header of said transmitted packet so as to perform the packet communication with respect to said base station by using the plurality of carriers.

57. (Withdrawn) A wireless communication terminal as claimed in claim 56 wherein said packet communication is carried out by using a variable length packet.

58. (Withdrawn) A wireless communication terminal as claimed in claim 56 wherein the single-carrier allocation information is allocated when the multi-carrier allocation information is unavailable, and

said wireless communication terminal judges a destination of the communication packet in one frame transmitted from said base station based upon said single-carrier allocation information contained in a header of said transmitted packet so as to perform the packet communication with respect to said base station by using the plurality of carriers.

59. (Withdrawn) A wireless communication terminal to which multi-carrier allocation information is allocated by a base station when the wireless communication terminal performs a packet communication with respect to said base station by using a plurality of carriers at the same time,

wherein said wireless communication terminal judges a destination of a communication packet in one frame of a predetermined number of time slots transmitted from said base station based upon said multi-carrier allocation information contained in a header of said transmitted packet so as to perform the packet communication with respect to said base station by using the plurality of carriers.

60. (Withdrawn) A wireless communication terminal as claimed in claim 59, wherein said packet communication is carried out by using a variable length packet.

61. (Withdrawn) A wireless communication terminal as claimed in claim 59 wherein the single-carrier allocation information is allocated when the multi-carrier allocation information is unavailable, and

said wireless communication terminal judges a destination of the communication packet in one frame of a predetermined number of time slots transmitted from said base station based upon said single-carrier allocation information contained in a header of said transmitted packet so as to perform the packet communication with respect to said base station by using the plurality of carriers.